

Y10



DESIGN AND TECHNOLOGY AT YARDLEYS

INTENT: The Design and Technology Curriculum aims to nurture the designers, engineers, and architects of a more sustainable world where they can be reflective and creative individuals able to solve real-world problems using practical solutions. Students are encouraged to consider the needs of others when designing and making products, taking into account the values, culture and the well-being of the nation. We also encourage them to take risks and question the world around them by understanding that design is all around us and that design is for all. The Design and Technology curriculum will give all students the cultural capital they need to succeed in life as well as the ability to challenge and change the ever-changing world of Design and Technology.

Y10 DESIGN AND TECHNOLOGY

Pupils undertake a very detailed design and make project with an emphasis on the needs of the user and designing in an iterative way. During this year they begin their final GCSE coursework project during the summer term.

YEAR 10

Theme	Designing and Design Development in Design and Technology Controlled Assessment: 1. New Product Launch 2. Circular Economy 3. Space	Making and Evaluating in Design and Technology Controlled Assessment: 1. New Product Launch 2. Circular Economy 3. Space	Research Launch of Final GCSE Project - Preparation for Summer Exam
SUBSTANTIVE KNOWLEDGE	Understand the needs of the User Researching the design problem Analysing the research Design Specification Producing initial design ideas Evaluating design ideas Modelling specific design ideas Modifying and presenting a final design idea Evaluating final idea against design specification	Planning for making Making a working prototype of the final design Using a wider range of materials, tools and techniques Using both traditional hand skills and CAM techniques and evaluating their effectiveness Critical evaluation the product and the process Feedback from the User	Understand the needs of the User Researching the design problem Analysing the research Design Specification Recap of learning Revision and introduction of core and additional topics
DISCIPLINARY KNOWLEDGE	Brainstorming the problem Analysing existing products Interviewing the user Identifying and presenting important data Writing a detailed design specification Informal and formal 3D drawing techniques Annotating 2D and 3D sketches Developing virtual 3D computer-aided designs	Flow charts – gantt charts Working properties of materials Stock forms and bought components Selecting materials Measuring and marking out Forming/de-forming – cutting and shaping Joining – temporary and permanent Finishing – aesthetic and functional	Brainstorming the problem Analysing existing products Interviewing the user Identifying and presenting important data Review and feedback from summer exam

We aim to provide students with a curriculum that educates the whole child, creating responsible and respectful citizens. Through the development of substantive and disciplinary knowledge students are given the tools that allow them to achieve excellence and be ready for life.

	Developing physical 3D sketch models Presenting final design using rendered drawings and CAD	Evaluating and testing products Getting user feedback Planning further modifications	
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